

```
3  /**=====
4  /** Application code
5  /**
6  /** Name: UserFSM()
7  /** Version:
8  /** Date:
9  /** Author:
10 /**
11 /** Short description:
12 /**
13 /**
14 /**=====
15 /**=====
16 /**===== START USER APPLICATION ===== START USER APPLICATION =====
17 /**=====
18 /**=====
19 //
20 // State machine
21 //
22 // Each phase exists of 2 parts, e.g. the phase actions and transition conditions.
23 // In the phase actions, all activated tags are mentioned. Deactivation is not needed, deactivation is
24 // done at the end of the main loop. In the conditions section, all conditions for the transitions to another
25 // phase are mentioned. When all condition are true, the new phase can be set. It is possible to programm
26 // more then 1 transition. In such a case it is necessary to keep the priority in mind.
27 //
28 /**=====
29
30
31 void UserFSM()
32 {
33     //
34     // Machine state "START" is the default state at startup of the board!
35     //
36     if (MachineState == FiniteState("START"))
37     {
38         //PHASE ACTIONS
39         //TRANSITION CONDITIONS//
40         if (DigFalling("S1")) TransitionToState("MULTITASK");
41     };
42
43     if (MachineState == FiniteState("MULTITASK"))
44     {
45         //PHASE ACTIONS
46         if (Timer(50, timADC))
47         {
48             if (ADConverter == 255) ADConverter = 0;
49             ADConverter = ADConverter + 1;
50         }
51         //TRANSITION CONDITIONS//
52         if (DigRising("S2"))
53         {
54             TransitionToState("TASK2");
55             TransitionToState("MULTITASK");
56         }
57         if (DigRising("S3"))
58         {
```

```
59     TransitionToState("TASK3");
60     TransitionToState("MULTITASK");
61 }
62 if (DigRising("S4"))
63 {
64     TransitionToState("TASK4");
65     TransitionToState("MULTITASK");
66 }
67
68 };
69
70 if (MachineState == FiniteState("TASK2"))
71 {
72     //PHASE ACTIONS
73     if (Timer(2000, timTask2)) AanUitTask2 = !AanUitTask2; else if (AanUitTask2) Activate("LED2");
74     //TRANSITION CONDITIONS//
75     if (DigFalling("S1"))
76     {
77         CancelTimer(timTask2);
78         TransitionToState("END");
79     }
80 };
81
82 if (MachineState == FiniteState("TASK3"))
83 {
84     //PHASE ACTIONS
85     if (Timer(720, timTask3)) AanUitTask3 = !AanUitTask3; else if (AanUitTask3) Activate("LED3");
86     //TRANSITION CONDITIONS//
87     if (DigFalling("S1"))
88     {
89         CancelTimer(timTask3);
90         TransitionToState("END");
91     }
92 };
93
94 if (MachineState == FiniteState("TASK4"))
95 {
96     //PHASE ACTIONS
97     if (DigHigh("LED2") && DigHigh("LED3")) Activate("LED5");
98     //TRANSITION CONDITIONS//
99     if (DigFalling("S1"))
100    {
101        CancelTimer(timTask4);
102        TransitionToState("END");
103    }
104
105 };
106
107
108 /*=====
109 /*=====
110 /*=====  END USER APPLICATION =====  END USER APPLICATION =====
111 /*=====
112 /*=====
113 }
```